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**How Do head coaches brief their athletes? Exploring transformational leadership behaviors in elite team sports**

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**Human Factors in Ergonomics and Manufacturing, 2021, 31(5) pp. 506-515**

Reference

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## **Abstract**

In sports, coaches and athletes consider the briefing function to be particularly important in promoting teamwork, achieving high performance and increasing expertise. Little is known about leadership briefing behaviours by Head Coaches (HCs) in elite sports in the fields of Human Factors and Ergonomics (HFE) and Sports Science. Although both domains play a role in understanding and optimising performance of athletes and staff, there is a lack of cross-disciplinary interaction. The present study aimed to facilitate cross-disciplinary interaction between HFE and Sports Science as well as investigate the briefing process. It explores the behaviours of HCs when briefing a team of players during top-level competitions (e.g. world championships). Semi-structured interviews were held with nine national team sport HCs. Interview data were used to identify briefing behaviours using the taxonomy of the Differentiated Transformational Leadership Inventory (Callow, Smith, Hardy, Arthur and Hardy, 2009). The results elicited briefing behaviours related to six transformational leadership behaviours: (a) individual consideration; (b) inspirational motivation; (c) intellectual stimulation; (d) fostering acceptance of group goals; (e) high performance expectations; and (f) appropriate role modelling. Fostering acceptance of group goals was the most frequently exhibited behaviour. The data highlighted the multifaceted nature of briefing in elite sports. HCs were shown to be transformational leaders who use various behaviours to promote teamwork and task-work in order to achieve team success. This study demonstrates that although traditional teamwork studies are useful and continue to be used, exploring transformational leadership behaviours can also provide insights into ways to improve team performance.

*Keywords:* Briefing, transformational leadership, coaching, elite sports, teamwork vs. task-work, expertise

The role played by Human Factors and Ergonomics (HFE) in sports and outdoor recreation (SOR) has grown over the last decade, with studies ranging from physical HFE to cognitive HFE and systems HFE (Salmon & Macquet, 2019). HFE in SOR aims to describe and understand the behaviours of individuals, teams, organisations and systems and to optimize them (Salmon, Read, Walker, Stevens, et al., 2020a). It plays an important role in understanding and optimising the performance of athletes and staff, organizations and systems, or injury and accident prevention (Salmon & Macquet, 2019).

Salmon, Stanton, Gibbon, Jenkins, et al. (2010) highlighted the lack of cross-disciplinary interaction between HFE and Sports Science. To bridge this gap, a number of HFE researchers looked at cross-disciplinary interaction, investigating HFE concepts such as decision-making and sense-making in sports contexts (e.g., Macquet, 2020; Macquet & Kragba, 2009). Salmon et al (2020b) demonstrated the need to facilitate cross-disciplinary interactions through the application of HFE concepts to Sports Science, however this interaction can prove valuable in the opposite direction too, with the application of Sports Science concepts to HFE.

HFE in SOR has received less attention in the area of coaching, specifically in briefing and debriefing in elite sports (Macquet, Ferrand, & Stanton, 2015). This could be due to the fact that only a small coaches manage elite teams (Macquet, 2010). Coaches and athletes consider the briefing function to be particularly important in order to achieve high performance (e.g., Mesquita, Rosa, Rosado, & Moreno, 2005). Within teams, formal briefings are conducted prior to a mission in order to facilitate communication within and between teams and thereby support teamwork (e.g., Wacker & Kolbe, 2015). Teamwork refers to the interdependent components of performance enabling efficient coordination of the performance of multiple individuals (Salas, Sims, & Burke, 2005). By way of contrast, task-work is concerned with the individual components of performance. In HFE, briefing provides

information about the mission planning (e.g., Stanton, Rafferty, Salmon, Revell et al., 2010), enables an understanding of shared mental models of what has to be accomplished by the team members (e.g., Lingard, Reghr, Orser, Reznick et al., 2008) and makes sense of situations in order to develop effective plans (Jensen, 2009).

In terms of HFE, the aims of team briefing in sports psychology can be related to the five core components of the teamwork model developed by Salas et al. (2005): (a) provide information about the game plan (e.g., Lainé, Mouchet, & Sarremejane, 2016), relating to *mutual performance monitoring*; (b) anticipate how to adapt the game plan in light of the changing circumstances (e.g., Mesquita et al., 2005), relating to *adaptability*; (c) foster mutual trust among teammates and encourage team cohesion (e.g., Lainé et al., 2016; Vargas-Tonsing, 2009), concerning *team orientation*; (d) inspire teams, encourage and push players to a higher level of performance (e.g., Vargas-Tonsing, 2009), pertaining to *team leadership*; and (e) pay attention to athletes' needs and positively influence emotions in a context of high level pre-competition anxiety (e.g., Breakey, Jones, Cunningham, & Holt, 2009), relating to *backup behaviours*.

Briefing in sports has received little empirical research, especially in elite sports. In top level sports, competitions include high stakes, pressure and uncertainty which have possible effects on emotions, attention and fatigue (Krane, 1994). Studying the briefing process is of particular interest in the context of top level performance because the briefing aims to prepare athletes to adapt to potential situations during competition (e.g., Mesquita et al., 2005) and relatively little is known about how to brief athletes. To our knowledge, no studies have examined briefing in team sports during major competitions, namely continental and world championships, the Olympic Games and qualifying tournaments. During these competitions, coaches have only a short time to brief athletes. The research described within this paper aims to fill this gap by developing a better understanding of coaches' experience of

briefing in elite team sports and facilitating cross-disciplinary interactions between HFE and Sports Science.

Coaches behave like leaders in managing their team (e.g., Smith, Young, Figgins, & Arthur, 2017). Bass (1999) modelled two styles of leadership: transactional and transformational. He showed that transactional leadership is concerned with the interactions between the leader and follower in order to meet their own self-interests. By way of contrast, transformational leadership refers to the leader guiding the follower beyond immediate self-interest. Transformational leadership relates to team leadership, which is a core component of teamwork (Salas et al., 2005). Identifying how HCs behave to promote teamwork at the time they brief their team of elite players is of central interest in this paper.

In elite military settings, Callow, Smith, Hardy, Arthur and Hardy (2009) developed the Differentiated Transformational Leadership Inventory (DTLI) to explain the specific components of transformational leadership. The DTLI has also been used in sports (Smith, Arthur, Hardy, Callow, Williams, 2013; Smith et al., 2017). This inventory comprises six transformational leadership behaviours: *individual consideration* (where leaders treat each follower as a respected individual and answer his/her needs); *inspirational motivation* (where leaders inspire others, develop and share a positive vision of the future); *intellectual stimulation* (where leaders push followers to solve problems in creative ways and use reasoning before taking action); *fostering acceptance for group goals and promoting teamwork* (where leaders favour cooperation among followers and promote teamwork to achieve common goals); *high performance expectations* (where leaders push followers to achieve high goals); *appropriate role modelling* (where leaders transmit what is really important and a sense of mission); and transactional behaviour concerned with *contingent rewards* (where leaders reward expected behaviours).

Smith et al. (2017) showed that all coaches were transformational leaders to some extent. The most cited behaviours by coaches were high performance expectations and individual consideration. Smith et al. (2013) showed that the transformational behaviours concerned with fostering acceptance of group goals and individual consideration affected task cohesion. These results provided interesting insight into transformational leadership behaviours used by coaches in general. They did not however account for the behaviours present during the briefing.

As transformational leadership behaviours have been shown to have a positive effect on individual and group outcomes in sports teams (Smith et al., 2017), it is important to understand the process through which this occurs in order to have a more complete picture of the behaviours used while briefing athletes during major competitions. Athletes need to be positively influenced and motivated to achieve their best and reach top level performances (e.g., Breakey et al., 2009). Although previous literature from HFE and sports psychology has stressed the aims of briefing (e.g., Vargas-Tonsing, 2009) and core components of teamwork (Salas et al., 2005), no study has investigated the transformational behaviours coaches use while briefing athletes in major competitions to foster teamwork and team performance. By examining the transformational behaviours coaches use when they conduct collective briefings for athletes, this research aims to better understand the briefing process.

To extend our understanding of leadership practices and teamwork and facilitate cross-disciplinary interaction between HFE and Sports Science, this study aims to use transformational leadership as a lens through which to explore HCs' behaviours when HCs briefed a team of athletes several hours or the day before a match during major competitions. More specifically, the aim of the study was to identify the "how" and "why" of briefing behaviours, establishing which leadership behaviours underpin the briefing process and teamwork in elite team sports.

## **Method**

To develop our understanding of briefing practice in elite sports, qualitative methodology was adopted in this study involving a form of inquiry (Smith & McGannon, 2017). This approach used semi-structured interviews. Interviews provide in-depth information that accounts for meaningful experience in contextual situations (Jones, 2015). They enable rich data to be captured from various perspectives (Smith & McGannon, 2017). Interviews give the researcher the freedom to explore in depth the participant's experiences within single cases and then place them in a larger framework in order to generalize *within* cases, as well as to generalize across them (Tracy, 2010). In organisational psychology literature and sporting contexts, researchers have conducted interviews to show the behaviours of effective leaders (e.g., Smith et al., 2017) and coaches when they briefed a sports team (Lainé et al., 2016). Furthermore, qualitative methods enable the interpretations of different participants to be examined and provide a richer representation of the theoretical construct from various perspectives (Peräkylä & Ruusuviori, 2011; Sparkes & Smith, 2013). Such a qualitative approach is particularly useful when there is limited access to participants (Klein, 2013). In the present study, interviews were used to explore the leadership experience of HCs in order to model HC behaviour during athlete briefings in major competitions.

## **Participants**

Seven male and two female HCs gave written, informed, consent and participated in the study. They were selected based on their position and relevant experience (Jones, 2015). The recruitment criterion was to enrol national HCs who worked with sports teams taking part in major competitions (four teams had won medals in the Olympic Games and/or European/world championships).

The first author made initial contact with these HCs to inform them of the purpose of the study and request permission to conduct interviews about their leadership behaviours

when they brief players. Participants included HCs of handball, basketball, volleyball and ice and field hockey teams. HCs varied in terms of years of coaching in first division club ( $M_{\text{club team}} = 13.9$  years,  $SD_{\text{club team}} = 7.2$  years), national team ( $M_{\text{national team}} = 7$  years,  $SD_{\text{national team}} = 4.6$  years), and gender (two females and seven males). This gender difference reflects a gender equity problem in France; there are very few female national coaches in Olympic sports (Lamberbourg & Paupardin, 2008). This may be an example of the glass ceiling, which limits female access to the position of manager in professional groups (Dubar & Triper, 2005). The study respected the ethics guidelines of the institution in which it took place and those of the French National Centre of Scientific Research and general data protection regulations applicable to research in Europe.

### **Data Collection**

Semi-structured interviews were conducted individually with each HC so that an understanding of the briefing process could be developed. The interviews were conducted during the national team sport off-season period, when HCs were preparing for the following season. An interview guide with three sections was created for this study. Section 1 provided information about the study's aim and the right to withdraw at any time of the study; participants were assured that personally identifiable information about themselves would not be disclosed at any point of the research process. Section 2 consisted of introductory questions (e.g., Would you like to introduce yourself?). These questions allowed the interviewer to develop a rapport with the participant and gain an insight into their background. Section 3 related to the HCs' behaviours when briefing athletes. HCs were asked to explain how they briefed their team under specific circumstances in order to explore experiences in depth within single cases (e.g., How do you start the briefing? What do you say to the athletes to enable them to adapt to the opposing team's game? What information do you present to the athletes? Do you pay attention to athletes while providing information? What do you say to

motivate them? Do you encourage athletes to analyse the opposing team's game?). Probing questions were asked to encourage participants to provide more information about relevant issues they had raised (e.g., What do you say to manage athletes' stress when the match stakes are high? What do you say to athletes when the opposing team has a better chance of success than their own team?).

Interviews were led by the lead author, who had already conducted such interviews in previous studies and had coaching and playing experience in team sports. The full interviews, which lasted between 60 and 90 minutes, were recorded and then transcribed. Participants confirmed the accuracy of transcriptions to confirm that the research data was valid (Smith & Mc Gannon, 2017; Tracy, 2010).

### **Data Processing**

There were two steps in the processing of the interview data. In the first step, the comparative method was used (Corbin & Strauss, 1990). This approach addressed the overall purpose of the briefings and led to questions such as: "What's going on?" and "What are they doing when they brief athletes? From these questions, concepts were generated to explain the way in which the behaviours were used. Inductive and deductive analysis were used to generate these concepts. Meaningful units were extracted from the interview transcripts to ascertain what HC behaviours look like in briefing. A meaningful unit is a segment of text providing a single idea. These meaningful units were classified into first-order categories (based on common features) and compared to gain robustness and meaningful coherence (Tracy, 2010).

Firstly, the first author and a collaborator trained in qualitative processing independently coded the transcribed interviews. The data was constantly compared. No additional data was obtained from the eighth interview, which was a good indication that saturation had occurred (Jones, 2015). Then, the first author and collaborator compared the

meaningful units (MU) they extracted from the interview transcripts and corresponding first-order categories these provided. Where disagreements emerged, researchers discussed to find an agreement. Researcher's reflection was used to improve cohesiveness, robustness and appropriateness (Jones, 2015; Smith, & McGannon, 2017). Moreover, 81.5% reliability was achieved for the identification and categorisation of the meaningful units. This is in line with the desirable threshold of 80% (Von Someren, Barnard, & Sandleberg, 1994) and Kappa-type, demonstrating that the agreement meets the requirements of qualitative data analysis (Landis & Koch, 1977). A total of 471 meaningful units were identified and classified into nine first-order categories.

Secondly, first-order categories that related to briefing behaviours were coded into second-order categories according to the classification scheme of the DTLI. Each behaviour was categorised within either the dimensions of transformational behaviour, namely (a) individual consideration; (b) inspirational motivation; (c) intellectual stimulation; (d) fostering acceptance for group goals; (e) high performance expectations; (f) appropriate role modelling; or transactional behaviour, namely (g) contingent rewards. For each first-order category, the question "What kind of leadership behaviour does this briefing behaviour relate to?" was asked.

The first author and the collaborator then compared the first-order categories with the dimensions of transformational and transactional leadership until agreement was reached, which occurred for each second-order category. In order to ensure neutrality, objectivity and trustworthiness in the results, category checking was used and participants confirmed the appropriateness of the categorisation of the data to the way they briefed athletes (Smith & McGannon, 2017; Tracy, 2010).

In the second step, the authors compared the behaviours underpinning the briefing process. More specifically, they compared the frequencies of transformational leadership

behaviours, and those of briefing behaviours among HCs, between expert and junior HCs, and male and female HCs.

## **Results**

All HCs reported that they minimised the length of the briefing presentation in order to allow athletes maximum time for concentration. They briefed athletes in a quiet room at the hotel; chairs were oriented toward a screen and a flip chart, like a classroom. Presentations lasted between 20 and 45 min depending on the time available before the match.

Two kind of results emerged from the data processing: (a) transformational behaviours demonstrated in briefing behaviours; and (b) comparison of the frequencies of the behaviours underpinning the briefing process. An overall model of the briefing process is presented in Fig.1.

\*\*\* insert Fig. 1 around here\*\*\*

### **Transformational behaviours demonstrated in briefing behaviours**

Results showed that briefings consisted of nine behaviours related to six transformational behaviours (Callow et al., 2009), namely: (a) individual consideration; (b) inspirational motivation; (c) intellectual stimulation; (d) fostering acceptance of group goals; (e) high performance expectations; and (f) appropriate role modelling (see Table 1). No results showed transactional behaviours related to providing contingent rewards, where leaders rewarded expected behaviours of athletes.

\*\*\* insert Table 2 around here\*\*\*

Results demonstrated a number of similarities among transformational dimensions. Intellectual stimulation, acceptance of group goals and high performance expectations were used to develop the game plan (i.e., mission planning). Individual consideration and inspirational motivation highlighted the team leadership dimension of teamwork (e.g., Salas et

al., 2005). High performance expectations and appropriate role modelling point to the team orientation dimension.

### **Comparison of the frequencies of the behaviours underpinning the briefing process**

Results indicated which leadership behaviours underpinned the briefing process. HCs were shown to exhibit all leadership behaviours apart from appropriate role modelling, and all briefing behaviours except “enable athletes to implement tactics from the briefing” and “adopt attitudes showing positive values” (see Table 2). Fostering acceptance of group goals was the most frequently exhibited transformational behaviour (38% of total behaviours, see Table 1). Behaviours related to individual consideration and intellectual stimulation were mentioned with similar frequency by all HCs (22% and 18%, see Table 1). HCs were shown to favour briefing behaviours that “presenting athletes with an assessment of the opposing team’s game and their own team’s plan (29% of total behaviours) and manage athletes’ stress and fatigue (22% of total behaviours, see Table 2).

\*\*\* insert Table 2 around here\*\*\*

### **Discussion**

This study is the first of which we are aware to explore transformational leadership in elite team sports during briefing by HCs of their teams in order to stimulate and inspire athletes to achieve positive outcomes. The results obtained in this study reinforce the use of the DTLI (Callow et al., 2009) and highlight behaviours used by HCs to promote teamwork. The results are discussed in two parts: (a) consistency with the DTLI and promotion of teamwork; and (b) behaviours underpinning the briefing process.

### **Consistency of results with the DTLI (Callow et al., 2009) and promotion of teamwork**

HCs were shown to manage athletes' stress and fatigue and build confidence when the athletes questioned their own ability, in a context of fatigue and pre-match anxiety. Results suggest that HCs use backup behaviours to take care of athletes and are attentive to their

needs and capabilities both during the game and the briefing and inspire confidence. These results are consistent with individual consideration as described within the DTLI (e.g. Smith et al., 2017) and analysis of complex systems in work (Hulme, McLean, Read, Dallat et al., 2019).

HCs identified stressors for athletes and focused on the problems raised and emotions to enable athletes to cope with stress, which is consistent with coping strategies explained by Lazarus and Folkman (1984) in their model of stress and coping. This suggests that HCs display interpersonal emotional competencies and are able to identify, understand, express, regulate and use the emotions of others. Emotional competencies enable effective teamwork to be developed by establishing a comfortable atmosphere among team members (Suwandana, 2019). Assessing the profile of emotional competence of HCs could be a worthwhile avenue for research in briefing and teamwork.

During briefing, HCs did not know exactly how the match would go. As the DTLI predicted (Callow et al., 2009), they spent time developing a vision of the team in which players went beyond self-interest, and did their best to achieve team success according to their roles and capabilities until the very end of the match. These results are in line with the dimensions of team orientation and team leadership in teamwork (Salas et al., 2005), and results in briefing (e.g., Lainé et al., 2016; Vargas-Tonsing, 2009).

Results demonstrated that HCs encouraged athletes: (a) to analyse opponents' strengths, weaknesses and patterns of coordination, and develop the game plan, and (b) to be flexible and adapt tactics. Encouraging athletes to analyse video sequences suggests that HCs wanted athletes to analyse the opponents' game themselves, identify possible problems, demonstrate initiative, and participate in the decision-making process. This problem-solving approach is consistent with the intellectual stimulation dimension within the DTLI (Callow et al., 2009; Smith et al., 2017), decision-making and assertiveness (Burke, 2004), and

adaptability (Salas et al., 2005). Inviting players to take part in the game analysis, using closed-looped communication and mutual trust (allowing them to admit possible mistakes or areas where they disagree), may help team members to share mental models and thereby improve team performance, in line with results seen in briefing in the field of medicine (Wacker & Kolbe, 2015). To our knowledge, no study on briefing has yet reported on the results of empowering athletes to make their own analysis and be responsible for the game plan. Exploring this strategy could provide a fruitful avenue for future research.

Analysis of the results highlighted the fact that HCs provided athletes with pragmatic perspectives to the problems raised and organised the work to be done. They gave athletes roles. This suggests that HCs aimed to favour explicit coordination, which has been proven to be effective in complex situations (Wacker & Kolbe, 2015), and achieve a common goal, in line with fostering acceptance of group goals (Callow et al., 2009) and mission planning (Stanton et al., 2010). Consistent with Mesquita et al.'s (2008) results, HCs provided concise information so that the athletes can remember it, despite the pre-match anxiety; they also shared descriptive information (i.e., opposing team's trends) and prescriptive information (i.e., pattern of coordination to implement).

Results indicated that the HCs enabled athletes to implement tactics from the briefing during a training session. Training session provided the opportunity to use backup behaviours to anticipate and adapt to players' needs and used close loop communication to ensure players shared mental models about what needed to be implemented and how to collaborate, in line with Callow et al.'s results (2009) and coordinating teamwork mechanisms (Burke, 2004; Salas et al., 2005). The training session also enabled implicit and explicit coordination to be encouraged, in line with results observed in team performance in medicine (Wacker & Kolbe, 2015), and contributed to players' empowerment and team spirit.

As the DTLI predicts, HCs were shown to set high performance expectations, and maintain high levels of performance and effort in order to win. Hulme et al. (2019) stressed the importance of sharing responsibility for performance within the team and the findings of our study support this position.

The results also showed that HCs did not frequently report on role modelling during briefing. Thus our findings do not necessarily support the idea of transmitting a sense of mission as described by Callow et al. (2009) and Hulme et al. (2019). Further work involving interviews with the leader and his/her followers, could improve our understanding of the role of mission.

Analysis of these results did not reveal any behaviour relating to the dimension of contingent rewards. It might be expected that this dimension would only be seen in HCs after a match is played, as shown by Macquet et al. (2015). Studying such behaviours could be a worthwhile avenue for future research.

### **Leadership behaviours underpinning the briefing process**

The results showed that HCs displayed all dimensions of transformational leadership, apart from appropriate role modelling, and favoured fostering acceptance of group goals and individual consideration. They suggest that HCs focused on the task to be completed and the individual completing the task, in line with studies on task-work and teamwork (e.g., Annett & Stanton, 2000). They support the notion that different leadership and briefing behaviours are used in different ways. The findings show the multifaceted nature of briefings in elite sports and complementarity of behaviours in favouring teamwork. They also show that the transformational leadership behaviours used by HCs while briefing are not limited to the team leadership dimension described in teamwork (e.g., Salas et al., 2005).

The results of the present study present some similarities and differences with Macquet et al.'s (2015) study on debriefing in elite team sports. During both briefing and

debriefing, HCs were shown to display transformational leadership and teamwork, consisting of individual consideration, intellectual stimulation and decision-making, mission planning, tactics implementation from the briefing/debriefing during a training session. In briefing, the current results also highlight that HCs motivated athletes, set high performance expectations and provided appropriate role modelling. In debriefing, previous results revealed that HCs acknowledged athletes' work and rewards (i.e., transactional leadership), suggesting that transactional leadership may be used solely in debriefing. Previous and current results also suggest that briefing and debriefing refer to a continual process and future research is warranted to examine leadership behaviours while briefing and debriefing in different contexts.

From an applied perspective, it would be interesting to develop workshop facilitators to enable HCs to analyse their own leadership behaviours. This could encourage HCs to introduce specific leadership and briefing behaviours, to engage in behaviour-change techniques such as behavioural practice (i.e., role-playing as a coach or player in briefing situations to use their newly-acquired behaviours), and to give feedback (e.g., group discussion about the when and how to display appropriate leadership behaviours while briefing a team). For more details, please see Lawrason, Turnnidge, Martin, and Côté (2019).

This study presents certain limitations. Firstly, it did not compare the findings of the interviews with the HCs with the views of athletes and staff. Inclusion of interviews with athletes and staff could provide additional information. Secondly, it did not compare the findings with those from other HCs. Briefing has received little empirical research, specifically in elite sports, and sports psychology research has often involved few participants because of the small number of coaches that manage elite teams (Macquet, 2010). Thirdly, the current study, which was exploratory, did not cover the effects of number of each behaviour

on the team performance. Studying such effects could open up other possibilities for future research.

### **Conclusion**

This study facilitates cross-disciplinary interactions between HFE and Sports Science and furthers understanding of the behaviour of expert HCs. It shows that HCs are transformational leaders who promote teamwork and task-work as ways to achieve team performance and athletes' well-being. The findings show the multifaceted nature of briefings in elite sports. They highlight the importance of pushing players to achieve high performances as well as supporting players emotionally and providing tactical guidance. The results reinforce the DTLI (Callow et al., 2009) and teamwork models (Salas et al., 2005; Burke, 2004). Although traditional teamwork studies are useful and should continue to be used, this study provides evidence that exploring leadership behaviours can also contribute insights into ways to improve team performance. Further study of briefing, leadership and teamwork are encouraged in sports and other contexts.

### **Data availability statement**

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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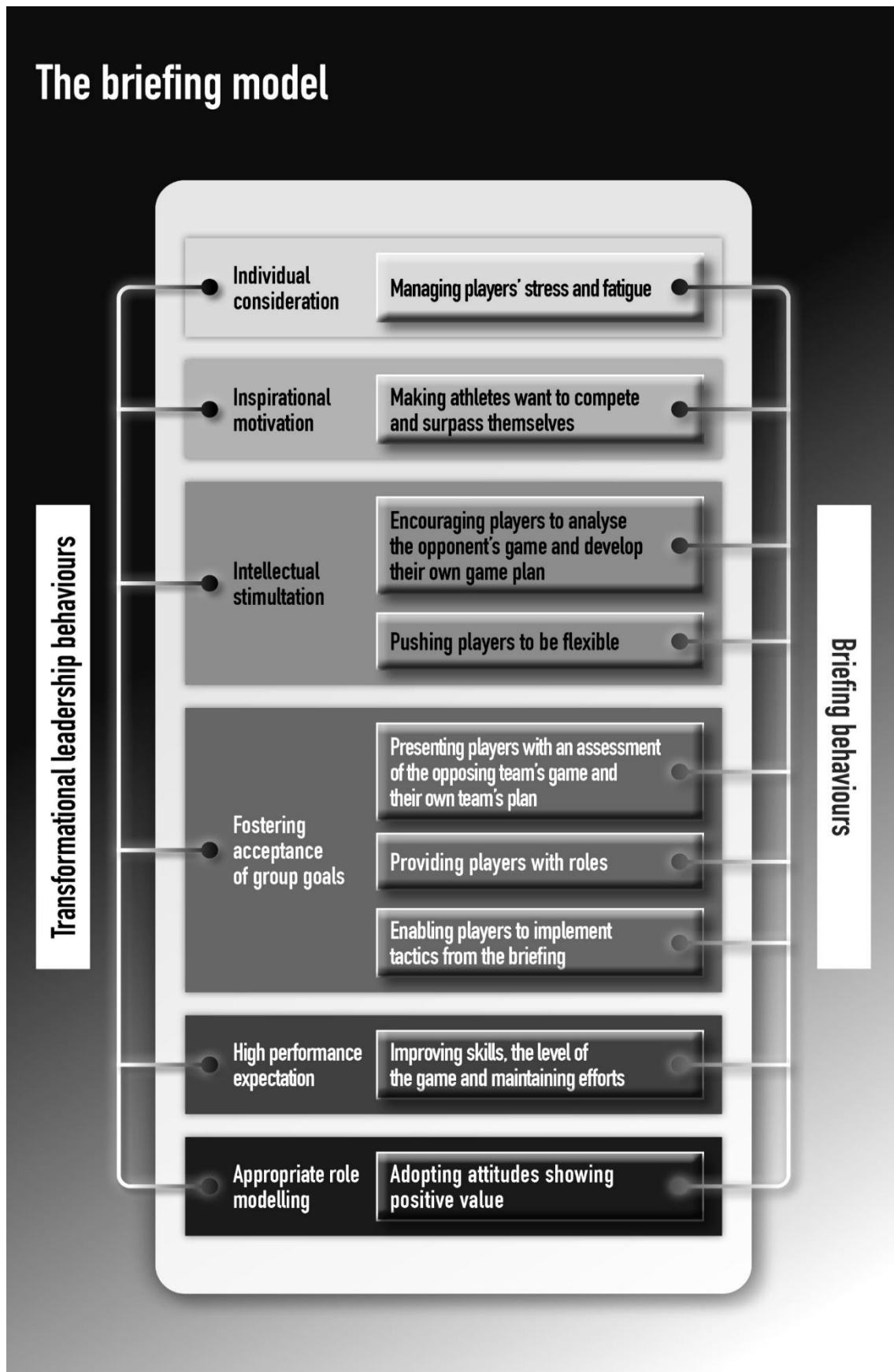
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Figure Legend:

Figure 1. *The Briefing Model*



## Table Caption

Table 1. *Framework of Briefing Behaviours*

Transformational dimension	Briefing behaviours	Definition	Illustration
Individual consideration	Managing players' stress and fatigue	Includes taking players' needs into account in a context of high stakes for teams and countries, treating each athlete as a respected individual, managing athletes' stress and fatigue by building confidence and taking limited attention into account	<i>Before playing Russia, we noticed that the players were stressed. We thought they needed to gain self-confidence. We showed them positive video sequences from difficult parts of the game during their match against Spain, in order to show them that they are able to achieve positive outcomes in difficult situations. We wanted to make them feel more confident".</i> HC9
Inspirational motivation	Making athletes want to surpass themselves	Relates to communication in order to foster players' motivation, inspire a positive vision of the future, incite players to achieve their best performance, and establish a positive atmosphere	<i>"Before the final, I told them they were the best team I had ever managed. I said: You've worked a lot. You've made progress. You've done your job, now you can go a long way in the OG..."</i> HC5
Intellectual stimulation	Encouraging players to analyse the opponent's game and develop their own game plan	Includes communication and stimulation of players to analyse opponents' strengths, weaknesses and patterns of coordination, prioritizing tasks, setting goals and developing the game plan; and encouraging players to solve problems in a creative way and use reasoning before taking action, as well as fostering assertiveness	<i>"We showed them video sequences of the opponents and pushed them to communicate and analyse the game. We asked them to analyse specific patterns of players' coordination. Then, we asked them what they thought they should do to adapt."</i> HC8
	Pushing players to be flexible	Refers to preparing players to adapt to unexpected internal or external changes under pressure and adjust tactics if they prove to be ineffective during a game	<i>"How will you play if the ball comes from that side?"</i> . HC9
Fostering acceptance of group goals	Presenting players with an assessment of the opposing team's game and their own team's plan	Includes developing a common understanding of the opponent's game (strengths, weaknesses and most effective pattern of coordination); presenting appropriate tactics to achieve common goals, prioritizing goals and setting a game plan; providing concise information so that athletes can retain it; ensuring they share mental models of game plans	<i>"we provide them information of opponents team tactics that can disrupt own team and how to adapt"</i> HC6
	Providing players with roles	Refers to providing players with specific roles and setting out what each player is expected to do (i.e., task-work), distributing the workload among teammates using accurate knowledge of their skills and responsibilities (i.e., teamwork)	<i>"We provided the setter and other players with information so that everyone knew what could happen and what they were required to do".</i> HC3
High performance expectations	Enabling players to implement tactics from the briefing	Concerns anticipating and predicting teammates' needs in order to implement tactics and, during training sessions, ensuring that players are able to carry them out and monitor teammate performance; encouraging players to ask questions, comment and adapt	<i>"During a short training session, we applied what we had said during the briefing, in order to ensure they had fully understood which tactics to implement, when and how. We pushed them to communicate with teammates to carry out the game plan".</i> HC7
	Improving skills, the level of the game and maintaining efforts	Includes maintaining effort throughout a match, and improving the level of the game to reach top-level performance and win medals, maintaining belief in the importance of teams goals over the goals of individual teammates	<i>"Before playing Brazil, I told them that this team was very efficient. We won't catch up with them. Nevertheless, we can be as efficient as them in that respect. Consequently, the score will be close and we can win."</i> HC3
Appropriate role modelling	Adopting attitudes showing positive values	Refers to transmitting positive attitudes, values, and sense of mission to players	<i>"It was important to start the Olympic Games, to find the right rhythm and then to progress. We aimed to display our concentration and conscientious attitude."</i> HC1

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Table Caption

Table 2. *Frequencies and Intraclass Percentage of Behaviours Reported by HCs during Briefings*

Transformational and briefing behaviours	N (%) participants	N (%) occurrences
<b>Individual consideration</b> Managing players' stress and fatigue	<b>9 (100%)</b>	<b>103 (22%)</b>
<b>Inspirational motivation</b> Fostering motivation and inspiring a positive vision of the future	<b>9 (100%)</b>	<b>49 (10%)</b>
<b>Intellectual stimulation</b> Encouraging players to analyse the opponent's game and develop their own game plan	<b>9 (100%)</b> 9 (100%)	<b>85 (18%)</b> 50 (11%)
<b>Fostering acceptance of group goals</b> Pushing players to be flexible	<b>9 (100%)</b> 9 (100%)	<b>179 (38%)</b> 35 (7%)
<b>High performance expectation</b> Present players with an assessment of the opposing team's game and own team's plan	<b>9 (100%)</b> 9 (100%)	<b>50 (11%)</b> 136 (29%)
<b>Appropriate role modelling</b> Provide players with roles	<b>4 (40%)</b> 9 (100%)	<b>5 (1%)</b> 30 (6%)
Adopting attitudes showing positive value	5 (60%)	13 (3%)

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